RELATIONSHIP OF SELECTED FACTORS TO TEACHERS' READINESS TO CHANGE

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TABLE OF CONTENTS

		Page
ACKNOWLEDGMENTS		ii
LIST OF TABLES		iv
CHAPTER I	THE PROBLEM	1
	Introduction	1
	Statement of the Problem	4
	Limitations of the Study	5
	Related Research and Literature	6
	Organization of the Study by Chapters	8
CHAPTER II	PROCEDURE	10
	Definition of Terms	10
	Instruments	11
	Procedure for Data Collection	15
	Procedure for Data Analysis	17
CHAPTER III	PRESENTATION OF ANALYSIS OF DATA	20
	Compilation of Data	20
	Data Analysis	21
CHAPTER IV	SUMMARY, CONCLUSIONS, AND IMPLICATIONS FOR FUTURE STUDY	49
	Design and Implementation of the Study	49
	Implications for Future Study	54
	Summary	56
APPENDICES	APPENDIX A	58
	Instruments	58
	APPENDIX B	72
	Supplemental Data	72
BIBLIOGRAPHY		79
ADDITIONAL REFERENCES		80

LIST OF TABLES

		Page
1.1	Paradigm for Change Processes	3
3.1	Relationship of Readiness to Change and Self-Evaluation: Responses Under Nine Conditions	22
3.2	Relationship of Readiness to Change and Self-Evaluation for Teachers in Elementary Schools With Open Climates	23
3.3	Relationship of Readiness to Change and Self-Evaluation for Teachers in Secondary Schools With Open Climates	24
3.4	Relationship of Readiness to Change and Self-Evaluation for Teachers in All Schools With Open Climates	25
3.5	Relationship of Readiness to Change and Self-Evaluation for Teachers in Elementary Schools With Closed Climates	27
3.6	Relationship of Readiness to Change and Self-Evaluation for Teachers in Secondary Schools With Closed Climates	28
3.7	Relationship of Readiness to Change and Self-Evaluation for Teachers in All Schools With Closed Climates	29
3.8	Relationship of Readiness to Change and Self-Evaluation for Teachers in All Elementary Schools	30
3.9	Relationship of Readiness to Change and Self-Evaluation for Teachers in All Secondary Schools	31
3.10	Relationship of Readiness to Change and Self-Evaluation for Teachers in All Schools	32
3.11	Summary of Correlation Coefficients Self-Evaluation and Readiness to Change Under Nine Conditions	33

		Page
3.12	Readiness to Change and Organizational Climate Analysis of Variance, Twelve Elementary and Twelve Secondary Schools	35
3.13	Readiness to Change and Organizational Climate, Elementary-Secondary, and Interaction Analysis of Variance Twelve Elementary and Twelve Secondary Schools	36
3.14	Scatter Diagram, Readiness to Change and OCDQ Rank Twenty-three Elementary Schools	37
3.15	Scatter Diagram, Readiness to Change and OCDQ Rank Fifteen Secondary Schools	38
3.16	Spearman's Rank-Difference Correlation Readiness to Change and Organizational Climate Twenty-three Elementary Schools	40
3.17	Spearman's Rank-Difference Correlation Readiness to Change and Organizational Climate Fifteen Secondary Schools	41
3.18	Relationship of Readiness to Change and Sex	42
3.19	Relationship of Readiness to Change and Occupation of Father	43
3.20	Relationship of Readiness to Change and Occupation of Major Wage Earner	43
3.21	Relationship of Readiness to Change and Grade Level Taught	44
3.22	Relationship of Readiness to Change and Marital Status	45
3.23	Relationship of Readiness to Change and Teaching Experience	45
3.24	Relationship of Readiness to Change and Age	46
3.25	Relationship of Readiness to Change and Degree Held - College Graduates	47
3.26	Relationship of Readiness to Change and Degree Held - All Teachers	48
3.27	Relationship of Readiness to Change and Continuing Education	48

CHAPTER I

THE PROBLEM

Introduction

The American educational system is performing a function essential to our democratic way of life. As the circumstances of our existence continue to change at an ever-increasing rate, teachers are frequently torn between those forces advocating change and those resisting change. Too often, this results in a stalemate or in changes based on impulse or pressure rather than sound judgment. One approach to improving the effectiveness with which an organization and its members undergo the process of change is to define more clearly individual and group characteristics which are related to readiness to change.

In this project the extent to which selected factors are related to teachers' readiness to change was studied. Lippitt, Watson, and Westley (9:233) state,

> No single change can equip a system to meet every problem that may arise in the future, unless it is the change from unwillingness to willingness to change.

Although certainly not a cure-all, an effective attitude toward change is essential for a social system to operate effectively. This project may be clarified and a basis established for the study by examining the circumstances which prompted this endeavor.

The accelerating rate of change in all facets of our society has stimulated the systematic study of the process of change itself. What produces a person's attitude and behavioral changes? Why are some individuals more receptive and some circumstances more conducive to change than others? Extensive research and theorizing have been done in efforts to understand these phenomena better.

The Yale Communications studies (8) provided insights into a person's susceptibility and resistance to influence. These analyses of audience response in terms of the characteristics of the audience and communicator and the nature of the communication revealed some of the bases of social change. Lippitt, Watson, and Westley (9) provided a careful analysis of the process of planned change. The "change agent" was discussed as an instrument for facilitating planned change. Much of the emphasis of these studies was on the function of an external influence such as a change agent. Only minimal consideration was given to the implications for institutional leaders undertaking cooperative efforts toward organizational improvement in relation to readiness to change among organizational members.

Tangential to this consideration Bennis, Benne, and Chin (1) compiled a wealth of material dealing with various perspectives of the change process. Bennis (1:154) suggested an eight-faceted paradigm of "species of change." The essential processes considered were those of mutual and nonmutual goal setting, each of which was subdivided into deliberate and nondeliberate conditions. These four categories were then interpreted under equal or one-sided distributions of power. It was the "planned change" process in Bennis' paradigm which was the focus of attention in this study. As shown in Table 1.1 below, such a

process was deliberately mutually developed under conditions of equal power.

Table 1.1 Paradigm for Change Processes

Power Distribution	Mutual Goal Setting		Nonmutual Goal Setting	
	Deliberate	Nondeliberate	Deliberate	Nondeliberate
Equal	Planned Change	Interactional Change	Technocratic Change	Natural Change
One-sided	Indoctrinal Change	Socialization Change	Coercive Change	Emulative Change

Additional insights into the process of change have been provided by a variety of research. Walster (13) found that:

> . . . the more confidence the subject (had) that his group could refute dissonant arguments . . . the more subjects would prefer dissonant over consonant information.

In another study by Walster and Walster (14), subjects selected similar discussion groups when there was uncertainty of the group liking them. In control groups and when uncertainty was removed (in either a positive or negative direction), a dissimilar group was preferred.

The high risk in accepting counter-normative positions was demonstrated by Schacter's study of group rejection of deviates as reported in Cartwright and Zander (3:260). The deviate, a confederate of the experimenter, was placed in a group of naive subjects. He was at first the object of most communication, but subsequently this communication diminished until ultimately he was rejected if he did not conform. This changing relationship clearly indicated the existence of strong forces toward complying with group standards.

Two types of risk have been illustrated: the risk of failure

through personal inadequacy, and the risk of losing favor with the group. These risks, which would certainly serve as forces retarding innovation, can be recognized within Halpin's (7) description of organizational climate. Can a leader identify individual and group characteristics within a social system which affect the perceived level of risk associated with a contemplated change? Some possible bases for an affirmative answer to this question were analyzed.

Statement of the Problem

Previous research has identified a variety of factors as being related to the process of change. The problem in this study was to investigate the relationship of some of these factors with readiness to change among selected public school teachers. Factors were selected on the basis of their perceived potential influence on readiness to change and on the basis of their applicability to the school setting. The selected factors and predicted relationships were synthesized in the following hypotheses.

Hypothesis I.--Readiness to change is directly related to the teachers' perceptions of their ability to handle a proposed innovation. This prediction extended the concept of Walster's study (13) in which subjects were more willing to receive dissonant information when confident of their own position. The expectation was for teachers confident of their ability to deal with new ideas to be more willing to consider innovations.

Hypothesis II.--Faculty readiness to change is directly related to the openness of the organizational climate of the school. Halpin's (7) concept of an open organizational climate was used. An open

climate is one in which the group is characterized by high morale and wholesome interpersonal and cooperative working relationships, and where the leadership is effective and considerate. A more complete explanation of this concept is included in the discussion of procedure. Here it is sufficient to recognize this hypothesis as predicting that where teachers perceive the environment to be relatively open, they will be more willing to consider innovations.

Hypothesis III.--Readiness to change is not related to sex, age, teaching experience, teaching level, degree held, marital status, occupation of head of household, occupation of father, or continuing education. This phase of the study was a replication of a portion of Dempsey's work with readiness for curriculum change (5). Use of the same instrument and similar data-gathering techniques made inclusion of this hypothesis appropriate.

Limitations of the Study

Any field study risks the influence of extraneous variables. Efforts were made in the design of this project to restrict results to those factors being studied, but the writer was alert during the study and in analysis of data for the appearance of unanticipated complications.

The instruments were used in situations somewhat different from those in which they were formulated. The writer found nothing in the literature that would indicate that the instruments were inappropriate for this study. This factor was considered more carefully in the description of the instruments presented in Chapter II of this paper.

Generalization upon the findings of this study must be limited to

schools similar to those included in the study. Although some variety was present in the sample used, neither the numbers involved nor the selective nature of the sample permitted broad generalization.

Related Research and Literature

Selected research results and scholarly opinions related to the hypotheses to be tested are considered below.

Hypothesis I.--Readiness to change is directly related to the faculties' perceptions of their ability to handle proposed innovations.

Trumbo reported that ". . . attitudes toward change are related to capacity to adjust to change situations" (12:342). In the previously mentioned study by Walster (13), subjects preferred to read and discuss dissimilar religious beliefs when their confidence was bolstered by an expert partner of like faith. They preferred reading and discussion of religious beliefs similar to their own when the partner assigned, although of like faith, lacked expertise.

To facilitate change, Lippitt, et al. (9:61) advocated development of new skills within the client system which could be used in problem solving or improving human relations. They viewed this facilitation of change as the task of a change agent. The benefit to the group may be the same regardless of who instigates it. These same writers encouraged the establishment of a permanent "mechanism of change-ability" (9:240) which would include the skills necessary to deal with future problems.

Hypothesis II .--Faculty readiness to change is directly related to the openness of the organizational climate of the school.

The work by Halpin provided both the instrument and the

theoretical basis for this part of the study. In Chapter IV of Theory and Research in Administration (7), he provided an explanation of what is meant by an "open climate" and discussed the formulation and application of an "Organizational Climate Description Questionnaire."

Briefly, an "open climate" may be defined as one in which teachers have high morale, are cooperating well with each other and feel relatively free from obstacles in performing their duties. The administrators in this climate would probably be energetic and considerate, working together with the faculty to achieve common goals. Teacher characteristics of a "closed climate" would include low morale, minimal personal involvement and a feeling that it is difficult to perform required tasks. Administrators in this climate tend to be aloof, highly directive and lacking consideration.

Miles, writing in Carlson, et al. (2:11) used task, maintenance, and growth dimensions to define organizational health which he stipulated is ". . . the school system's ability not only to function effectively but to develop and grow into a more fully-functioning system" (2:12). He criticized the current tendency to focus ". . . on the thingness of the particular innovation, taking the local system itself as a kind of unmodifiable ground against which the innovation shows up in stark figure" (2:12). He held that organizational properties are modifiable and should be the object of change efforts.

In the classic studies reported by White and Lippitt in Cartwright and Zander (3:527) ". . . both work and play showed a higher level of originality in the democracies." Trumbo (12:344) reported:

> Supervisors' attitudes toward change were positively related to Group Change scores, while supervisors' scores on a measure of authoritarianism were negatively related to Group Change scores.

Hypothesis III.--Readiness to change is not related to sex, age, teaching experience, teaching level, degree held, marital status, occupation of head of household, occupation of father, or continuing education.

Except for the characteristics of age and experience, this hypothesis presents Dempsey's findings (5). Trumbo (12:340) in his study of insurance office employees found men attained significantly higher change scale scores than women. Mason and others, in Charters and Gage (4:278) reported major differences between male and female career orientations that might be expected to affect readiness to change.

Much groundwork has been done in analyzing the process of change. It is now appropriate to extend this research in a direction which will permit the results to be applied more readily. This study proposes to make such a contribution in the field of educational administration.

Organization of the Study by Chapters

Chapter I consists of an introduction, statement of the problem, limitations of the study, review of research and organization of the study by chapters.

The procedures for the study are incorporated in Chapter II. Included here are definitions of terms, explanations of the instruments used, and procedures for data collection and data analyses.

Chapter III presents the data analysis. Consideration is given to the compilation of data and to their statistical analysis.

The summary, conclusions, and implications for further study constitute Chapter IV. The design and implementation of the study are considered in retrospect. The writer's conclusions based on the study of each hypothesis are presented and some implications for further study suggested. A brief summary concludes the chapter and the textual portion of this paper.

CHAPTER II

PROCEDURE

Before presenting the design of the study, a more complete description will be given of the factors pertinent to this study and the instruments used in securing the data.

Definition of Terms

1. "Readiness to change" in this study refers to an individual's attitude toward work-related change. It is assumed that some individuals are more willing than others to examine new ideas critically, to attempt new tasks, or to accept risks associated with innovation.

2. "Self-perceived ability" is simply the individual's own report of how capable he thinks he is in coping with changing job situations.

3. "Organizational climate" may be considered the institutional personality of the school. Halpin (7:161) reported three major factors determining organizational climate: the extent to which individual "social needs" are met, "esprit" or morale and the extent to which group goals can be achieved, and "social control" or the effectiveness of the organizational structure and the administration of it.

4. "Personal characteristics" of teachers which are considered include sex, age, years of teaching experience, teaching level (elementary or secondary), highest degree held, continuing education, marital status, occupation of head of household, and occupation of father.

Instruments

1. Readiness to Change Scale: This scale was developed by Don A. Trumbo in his unpublished dissertation, An Analysis of Attitudes Toward Change Among the Employees of an Insurance Company (11). Trumbo studied the attitudes toward change of 232 employees and forty-six supervisory personnel. The stimulus used was the introduction of a digital computer designed to perform several clerical tasks and resulting in a degree of job variety, change in work flow, and change in operational procedures.

Trumbo's Readiness to Change Scale used a Likert-type scale and measured the degree of agreement or disagreement with nine items. The following is an example of the questions used:

> One can never feel at ease on a job where the ways of doing things are always being changed.

The complete scale is presented in Appendix A.

Trumbo (12:339) reported that:

> Response to these items was coded serially from 1 to 5 with high item scores indicating favorable change attitudes. Summated scores ranged from 11 to 45 with a mean score of 28.03 (standard deviation = 6.64) . . . . The corrected odd-even reliability coefficient was .79. Hence the items met the criteria for a Likert scale and were called the Change Scale.

In the abstract of his dissertation Trumbo (11) reported:

> Tests on the validity of the scale were based on the assumption that favorable attitudes toward change, per se, whould be associated with favorable responses to specific change events and with evidence of preparation for change through participation in training programs. These predictions were supported by the data.

Faunce (6:142) described the reliability and validity of the Readiness to Change Scale in the following terms:

> Item score means of the upper and lower groups selected from the total score distribution were significantly different at least at the .01 level for each of the nine items. The product-moment correlation between scores on this scale for two administrations of the questionnaire was .63. This would indicate adequate test-retest stability over a six-month period when factors which would be expected to increase or decrease "readiness to change" during this period are considered.
>
> The validity of the scale is more difficult to assess but there is evidence of logical or construct validity. The respondents with high scores on the Readiness to Change Scale reacted more favorably to the particular change in their jobs occurring during the period of this study.

A test-retest product-moment correlation computed by this writer produced an r of 0.52. The Trumbo scale was therefore modified by adding six similar items. A test-retest correlation was then computed with this fifteen-item instrument producing an r of 0.64. This revised scale called "Attitude Toward Change" is presented in Appendix A.

2. Organizational Climate Description Questionnaire: Halpin (7:147) developed the OCDQ by screening about 1,000 Likert-type items

> . . . principally by constructing and testing three preliminary forms of the OCDQ. The major analysis was done with data on Form III of the OCDQ, secured from 1151 respondents in a total of 71 elementary schools . . . . The present "final" version, Form IV, is composed of 64 items (plus five buffer items to fill the IBM card) . . . . By factor analysis we identified eight dimensions of Organizational Climate.

The first four of these dimensions deal with teachers' behavior, while the last four are concerned with the principal's behavior. Halpin (7:150-51) described these dimensions as follows:

> Teachers' Behavior
>
> 1. Disengagement refers to the teachers' tendency to be "not with it." This dimension describes a group which is "going through the motions," a group that is "not in gear" with respect to the task at hand . . . . In short, this subtest focuses upon the teachers' behavior in a task-oriented situation.

2. Hindrance refers to the teachers' feeling that the principal burdens them with routine duties, committee demands, and other requirements which the teachers construe as unnecessary "busywork." The teachers perceive that the principal is hindering rather than facilitating their work.

3. Esprit refers to morale. The teachers feel that their social needs are being satisfied, and that they are, at the same time, enjoying a sense of accomplishment in their job.

4. Intimacy refers to the teachers' enjoyment of friendly social relations with each other. This dimension describes a social-needs satisfaction which is not necessarily associated with task-accomplishment.

Principal's Behavior

5. Aloofness refers to behavior by the principal which is characterized as formal and impersonal. He "goes by the book" and prefers to be guided by rules and policies rather than to deal with the teachers in an informal, face-to-face situation. His behavior, in brief, is universalistic rather than particularistic; nomothetic rather than idiosyncratic. To maintain this style, he keeps himself--at least, "emotionally"--at a distance from his staff.

6. Production Emphasis refers to behavior by the principal which is characterized by close supervision of the staff. He is highly directive and plays the role of a "straw boss." His communication tends to go in only one direction, and he is not sensitive to feedback from the staff.

7. Thrust refers to behavior by the principal which is characterized by his evident effort in trying to "move the organization." Thrust behavior is marked not by close supervision, but by the principal's attempt to motivate the teachers through the example which he personally sets. Apparently, because he does not ask the teachers to give of themselves any more than he willingly gives of himself, his behavior, though starkly task-oriented, is nonetheless viewed favorably by the teachers.

8. Consideration refers to behavior by the principal which is characterized by an inclination to treat the teachers "humanly," to try to do a little something extra for them in human terms.

The subtest profiles for seventy-one elementary schools were analyzed and those profiles were classified in respect to six organizational climates ranging from open to closed. The group characteristics of the open climate included high "esprit," low "disengagement," low "hindrance," and only a moderate degree of "intimacy." The leader's characteristics included high "thrust" and "consideration," combined with freedom from "aloofness" and "production emphasis." Other climates were similarly defined in terms of the eight characteristics. The next most open climate was called "autonomous," then "controlled," "familiar," "paternal," and finally "closed." The group in this closed climate was characterized by high "disengagement" and "hindrance," low "esprit," and average "intimacy." The leader displayed high "aloofness" and "production emphasis," little "thrust" and low "consideration."

The OCDQ can be administered to a group in about thirty minutes. Respondents were asked to indicate to what extent each statement characterized their school. A sample item is, "The principal insures that teachers work to their full capacity." There are four response alternatives:

1. Rarely occurs
2. Sometimes occurs
3. Often occurs
4. Very frequently occurs

The complete OCDQ, as used in this study, is presented in Appendix A.

3. Personal Information: This form requested the nine items of personal information required. Although some of these personal characteristics were included in the OCDQ form, all except sex were

listed separately in Part II of this questionnaire (Appendix A) because of the different grouping of data used in Dempsey's computation.

4. Self-Evaluation: This measure was designed by the writer to obtain the teachers' self-evaluation of their ability to cope with innovation. The seven Likert-type items were used to secure teachers' responses indicating how confident and comfortable they claimed to be in dealing with new ideas, tasks, or situations. Teachers' replies to this form and the "Personal Information" form were designed to determine existing characteristics at a point in time and were not, therefore, tested for reliability. This instrument is presented in Appendix A.

All of these instruments were combined to form one questionnaire entitled "A Study of Teachers' Attitudes Toward Change as Related to the Organizational Climate of the School." Part I of the questionnaire was the Organizational Climate Description Questionnaire. Part II included the Personal Information, Self-Evaluation, and Attitude Toward Change instruments.

Procedure for Data Collection

A study design involving twenty-four schools, twelve elementary and twelve secondary, was the original basis for this investigation. The questionnaire was to be administered to at least thirty faculties; the six most open and six least open at each level were to constitute the school and teacher subjects for the study. In Hypotheses I and III individual teachers constituted the population, while in Hypothesis II school faculties were considered as groups.

Schools participating in this study were all located in one

south-central Pennsylvania county. They represented ten of the fourteen independent school districts within the county. A form of stratified-random sampling procedure was used. Schools were divided into rural and suburban categories and invitations to participate were extended at random to an approximately equal number of schools from each group. These districts each had from 2,000 to 4,000 students within their elementary and secondary schools. The districts were suburban, small town, and rural, and were located within a 20-mile radius of an urban area of approximately 70,000 population.

Each district had one or two secondary schools and numerous elementary schools. The secondary faculties ranged from eighteen to fifty-six teachers. The elementary schools were staffed by from four to eighteen teachers. This size differential disrupted the intended balance of the original design.

In order to compensate partially for their smaller faculties, more elementary schools were asked to participate. The questionnaires actually were administered to twenty-three elementary and fifteen secondary schools.

The writer introduced the study and gave the instructions at each administration of the instruments. In two secondary and four elementary schools the teachers immediately completed the instruments and returned them unsigned. In all other schools, the instructions were handled as indicated above but teachers retained the forms, filled them out at their convenience, and returned them to a designated location. This return location was selected to insure the privacy of the respondent.

Procedure for Data Analysis

Hypothesis I.--Readiness to change is directly related to the teachers' perceptions of their ability to handle a proposed innovation.

A linear relationship was assumed to exist between the characteristics of readiness to change scores and self-evaluation scores. The elliptical pattern of the scatter diagram indicated that this assumption was sufficiently accurate to permit use of the Pearson coefficient of correlation. This analysis included teachers of thirty-six cooperating schools providing an "n" of over 500. Subanalyses were computed with this relationship under more open and less open organizational climates, and under elementary and secondary conditions.

Hypothesis II.--Faculty readiness to change is directly related to the openness of the organizational climate of the school.

The schools were divided into three categories ranging from most open to least open with eight schools in each category. Change scores for teachers in these schools were studied by analysis of variance to identify the probability of nonchance variation of change scale scores between climates.

F ratios were computed within the original twenty-four-school design. Two rank-difference coefficients of correlation were calculated, one for elementary schools and one for secondary schools.

Hypothesis III.--Readiness to change is not related to sex, age, teaching experience, teaching level, degree held, marital status, occupation of head of household, occupation of father, or continuing education.

Dempsey's method of grouping and analyzing the relationship

between the personal data and readiness to change was adhered to as closely as possible to facilitate comparison of results. The frequencies with which levels of each characteristic were associated with levels of readiness to change were entered in a contingency table. The chi-square test was applied to these frequencies to test the existence of a nonchance relationship and a product-moment correlation was obtained to measure the degree of correlation.

Readiness to change scores were grouped into three categories, "low," "medium," and "high," with each group containing approximately one-third of the total responses. Change scores of 54 and above were considered "high," scores of 46 to 53 were "medium," and scores of 45 and below were "low." Other characteristics which were related to readiness to change were similarly regrouped.

Marital status was considered in terms of "married" and "other" teachers. Occupation of father was defined in terms of "white collar," "farmer," and "blue collar" employment. Occupation of major wage earner was divided into "professional" and nonprofessional" classifications.

Teaching experience responses were grouped into "low" (0 - 4 years), "medium" (5 - 14 years), and "high" (15 or more years). Age was also grouped "low," "medium," and "high," with respective age limits of 20 to 34, 35 to 49, and 50 or older. Continuing education was reported simply "yes" or "no" to indicate whether or not teachers were pursuing some academic goal.

In considering the degree held by a teacher, Dempsey (5:83) used classifications of "bachelor's," "master's," and "other." He then omitted teachers in the "other" category because they represented only

2 per cent of his sample. This study provided analysis of the dual classification to replicate Dempsey's work but also included analysis of all three degree levels. This was done because 7.2 per cent of the responses indicated other than a bachelor's or master's degree. All of these were nondegree teachers.

Several factors should be noted when analyzing these data as a replication of Dempsey's study (5). Dempsey used the nine-item form of the Readiness to Change Scale. His study was limited to teachers of one urban school district in which he was an administrator. These differences from the circumstances of this study should be considered when making comparative analyses.

In all data analyses in this study, results were expected to meet at least the 0.05 level of significance to be considered statistically valuable.

CHAPTER III

PRESENTATION OF ANALYSIS OF DATA

Compilation of Data

The questionnaires were administered in April and May, 1967. This writer returned to the schools about one week after the administration to pick up the completed forms. As soon as the questionnaires were collected, they were checked for completeness, identified by school and subject, and prepared for processing.

All returns were checked for completeness and double answers. If the Readiness to Change and OCDQ sections were complete, the form was retained as a usable response. The tabulation of these responses provided the data used to test Hypothesis II. A few of these forms were not usable for testing Hypotheses I and/or III because of incomplete or double responses in the personal information or self-evaluation portions of Part II. Therefore, the "n" for Hypotheses I and III was slightly less than the maximum usable responses.

There was a total of 866 teachers on the faculties of the participating schools. Usable responses were obtained from 594 or 69 per cent of these teachers. Individual school faculty responses ranged from 40 per cent to 100 per cent. A complete report of maximum usable returns is provided in Appendix B. There were three basic reasons for the nonresponders.

1. Not all teachers were able to be present at the presentation of the questionnaire. Coaching assignments, bus duty, and illness were some of the conflicts. Fifty-six teachers were absent.

2. Participation was voluntary. Almost every teacher present accepted a questionnaire but not all were returned. A total of 189 forms were in this category.

3. Of those forms returned, some were rejected because of incomplete, double, or unusable responses. Obvious errors, such as years of teaching experience almost equal to age, were rejected. Twenty-seven questionnaires were excluded from the study for these reasons.

For scoring purposes, Parts I and II were separated, but these parts of each individual's questionnaire were numbered for identification purposes. The OCDQ was computer scored by Don Croft at the University of New Mexico. All portions of Part II were hand scored.

For major analysis in Hypothesis II and for subanalyses in Hypothesis I, schools were ranked by openness as measured by the OCDQ. High schools were identified S--1 (open) to S--15 (closed) (Appendix B). Elementary schools were similarly ranked E--1 to E--23 (Appendix B). The "open" or "closed" classification does not imply a dichotomy. It identifies the extreme of this sample toward which the particular school was more inclined.

Data Analysis

Hypothesis I.--Readiness to change is directly related to the teachers' perceptions of their ability to handle a proposed innovation.

Readiness to change scores and self-evaluation scores were tabulated under open and closed, elementary and secondary conditions, to permit subanalyses as well as a direct test of this hypothesis. The design of this analysis is presented in Table 3.1 below. The numbers

in each cell indicate the number of questionnaires used in this computation.

Table 3.1 Relationship of Readiness to Change and Self-Evaluation: Responses Under Nine Conditions

	School Climate		
	Open	Closed	Total
Elementary Teachers	99	87	186
Secondary Teachers	202	166	368
Total	301	253	554

Teachers from schools E--1 through E--11 and S--1 through S--7 were used for the open condition and teachers from schools E--13 through E--23 and S--9 through S--15 were used for the closed condition. Data were analyzed under all nine conditions.

Teachers in elementary schools with open climates revealed a positive relationship between their professed confidence in dealing with change and their readiness to change. The obtained Pearson r of 0.205 was significant at the 0.05 level (Table 3.2).

Teachers in secondary schools with open climates did not indicate a significant relationship between professed confidence in dealing with change and readiness to change. The 0.05 level of significance was not satisfied by this r of 0.116 (Table 3.3).

Teachers in all schools with open climates revealed a positive relationship between professed confidence in dealing with change and readiness to change. The Pearson r of 0.146 was significant at the 0.05 level (Table 3.4).

Table 3.2 Relationship of Readiness to Change and Self-Evaluation for Teachers in Elementary Schools With Open Climates

Self-Evaluation Scores	Readiness to Change Scores 19-21	22-24	25-27	28-30	31-33	34-36	37-39	40-42	43-45	46-48	49-51	52-54	55-57	58-60	61-63	64-66	67-69	70-72	fy
34-35					1								1						2
32-33											2				1		1		4
30-31							1		1				4	3	2				11
28-29						1			2	1	1	5	1	2	2		1		16
26-27						1	2	1		5	1	2	2	2	1				17
24-25								3	1		4		1	1			1		11
22-23						1	3			3	2								9
20-21				1		1	1	1	1	2									7
18-19					1		3	1		2	1		1	1					10
16-17										1	1	3							5
14-15					1						1		2						4
12-13																			0
10-11												1		1					2
8-9															1				1
fx	0	0	0	1	3	4	10	6	5	14	13	11	12	10	7	0	3	0	99

r = 0.205 Significant at 0.05 Level

Table 3.3 Relationship of Readiness to Change and Self-Evaluation for Teachers in Secondary Schools With Open Climates

Self-Evaluation Scores	Readiness to Change Scores																	
	19-21	22-24	25-27	28-30	31-33	34-36	37-39	40-42	43-45	46-48	49-51	52-54	55-57	58-60	61-63	64-66	67-69	70-72	fy
34-35										1		1		3					5
32-33							1	1			2	2	2	2					10
30-31						1		2	1	2	3	4	5	2	2				22
28-29								1	1	5	5	4	5	1	2	1	1		26
26-27							3	2	5	5	5	4	2	4	2			1	33
24-25				1	1	1	5	2	5	3	8	7	1	1	2	1	1		39
22-23						1		1	2	4	1	3	2					1	15
20-21							2	1	1	2		2	1	2					11
18-19					1	1	2		2	3		1	1	1					12
16-17						1				3				3	1				8
14-15										1	3	1	1		1	1			8
12-13							1	1	1	1	1	1	1	1					8
10-11											1	1			1				3
8-9								1		1									2
fx	0	0	0	1	2	5	14	12	18	31	29	31	21	20	11	3	2	2	202

r = 0.116 Not Significant at 0.05 Level

Table 3.4 Relationship of Readiness to Change and Self-Evaluation for Teachers in All Schools With Open Climates

Self-Evaluation Scores	Readiness to Change Scores																		
	19-21	22-24	25-27	28-30	31-33	34-36	37-39	40-42	43-45	46-48	49-51	52-54	55-57	58-60	61-63	64-66	67-69	70-72	fy
34-35					1					1		1	1	3					7
32-33							1	1			4	2	2	2	1		1		14
30-31						1	1	2	2	2	3	4	9	5	4				33
28-29						1		1	3	6	6	9	6	3	4	1	2		42
26-27						1	5	3	5	10	6	6	4	6	3			1	50
24-25				1	1	1	5	5	6	3	12	7	2	2	2	1	2		50
22-23						2	3	1	2	7	3	3	2					1	24
20-21				1		1	3	2	2	4		2	1	2					18
18-19					2	1	5	1	2	5	1	1	2	2					22
16-17						1				4	1	3		3	1				13
14-15					1					1	4	1	3		1	1			12
12-13							1	1	1	1	1	1	1	1					8
10-11											1	2		1	1				5
8-9								1		1					1				3
fx	0	0	0	2	5	9	24	18	23	45	42	42	33	30	18	3	5	2	301

r = 0.146 Significant at 0.05 Level

Teachers in elementary schools with closed climates revealed a positive relationship between professed confidence in dealing with change and readiness to change. The coefficient of correlation of 0.221 was significant at the 0.05 level (Table 3.5).

Teachers in secondary schools with closed climates revealed no appreciable relationship between professed confidence in dealing with change and readiness to change. This r of 0.054 was not significant (Table 3.6).

Teachers in all schools with closed climates revealed no significant relationship between professed confidence in dealing with change and readiness to change. The Pearson r of 0.119 did not satisfy the 0.126 required for significance at the 0.05 level (Table 3.7).

Teachers in all elementary schools revealed a significant relationship between professed confidence in dealing with change and readiness to change. Significance at the 0.01 level was ascribed to this r of 0.208 (Table 3.8).

Teachers in all secondary schools revealed a weak relationship between professed confidence in dealing with change and readiness to change. An r of 0.087 was not significant at the 0.05 level (Table 3.9).

Teachers in all schools revealed a positive relationship between professed confidence in dealing with change and readiness to change. This r of 0.131 was significant at the 0.01 level (Table 3.10).

Although the basic proposition of Hypothesis I was supported, the coefficient of correlation of 0.131 did not indicate a strong relationship. Converting this to a coefficient of determination produced an r^2 of 0.017. Therefore, the percentage of the variance in self-confidence

Table 3.5 Relationship of Readiness to Change and Self-Evaluation for Teachers in Elementary Schools With Closed Climates

Self-Evaluation Scores	Readiness to Change Scores																		
	19-21	22-24	25-27	28-30	31-33	34-36	37-39	40-42	43-45	46-48	49-51	52-54	55-57	58-60	61-63	64-66	67-69	70-72	fy
34-35																2		1	3
32-33							1		1		3	2	1						8
30-31											2	2	3		1				8
28-29								2	3	2	2		1						10
26-27				2			1		2		4		1						10
24-25						2		3	2		2	2	1						12
22-23	1			1	1	1	1	2	4			1			1	1			14
20-21					2		1			3	1				1				8
18-19					1			2				1							4
16-17										1	1			1					3
14-15								1					1						2
12-13				1															1
10-11								1					1		1				3
8-9												1							1
fx	1	0	0	4	4	3	4	11	12	6	15	9	9	1	4	3	0	1	87

r = 0.221 Significant at 0.05 Level

Table 3.6 Relationship of Readiness to Change and Self-Evaluation for Teachers in Secondary Schools With Closed Climates

Self-Evaluation Scores	Readiness to Change Scores 19-21	22-24	25-27	28-30	31-33	34-36	37-39	40-42	43-45	46-48	49-51	52-54	55-57	58-60	61-63	64-66	67-69	70-72	fy
34-35									2				1						3
32-33							1	1	1	2	3	1	2	1					12
30-31				1			2	1	4	2		2	2			2			16
28-29						4		2	3	3	3	4	4	3		1			27
26-27								2	4	2	4	5	2	2	2				23
24-25						1	5	3	2	2	6		1			3			23
22-23						2			1	3	2	5		1					14
20-21					1	2	2	2	1	3	1				1				13
18-19						1		2	2	2	1	1	2						11
16-17						1	2	2	1	1	4								11
14-15									1		1	2							4
12-13									2				1	1					4
10-11										1			1	1					3
8-9											1		1						2
fx	0	0	0	1	1	11	12	15	24	21	26	20	17	9	3	6	0	0	166

r = 0.054 Not Significant at 0.05 Level

Table 3.7 Relationship of Readiness to Change and Self-Evaluation for Teachers in All Schools With Closed Climates

Self-Evaluation Scores	Readiness to Change Scores																		
	19-21	22-24	25-27	28-30	31-33	34-36	37-39	40-42	43-45	46-48	49-51	52-54	55-57	58-60	61-63	64-66	67-69	70-72	fy
34-35									2				1			2		1	6
32-33							2	1	2	2	6	3	3	1					20
30-31				1			2	1	4	2	2	4	5		1	2			24
28-29						4		4	6	5	5	4	5	3		1			37
26-27				2			1	2	6	2	8	5	3	2	2				33
24-25						3	5	6	4	2	8	2	2			3			35
22-23	1			1	1	3	1	2	5	3	2	6		1	1	1			28
20-21					3	2	3	2	1	6	2				2				21
18-19					1	1		4	2	2	1	2	2						15
16-17						1	2	2	1	2	5			1					14
14-15								1	1		1	2	1						6
12-13				1					2				1	1					5
10-11								1		1			2	1	1				6
8-9											1	1	1						3
fx	1	0	0	5	5	14	16	26	36	27	41	29	26	10	7	9	0	1	253

r = 0.119 Not Significant at 0.05 Level

Table 3.8 Relationship of Readiness to Change and Self-Evaluation for Teachers in All Elementary Schools

Self-Evaluation Scores	Readiness to Change Scores 19-21	22-24	25-27	28-30	31-33	34-36	37-39	40-42	43-45	46-48	49-51	52-54	55-57	58-60	61-63	64-66	67-69	70-72	fy
34-35					1								1			2		1	5
32-33							1		1		5	2	1		1		1		12
30-31							1		1		2	2	7	3	3				19
28-29						1		2	5	3	3	5	2	2	2		1		26
26-27				2		1	3	1	2	5	5	2	3	2	1				27
24-25						2		6	3		6	2	2	1			1		23
22-23	1			1	1	2	4	2	4	3	2	1			1	1			23
20-21				1	2	1	2	1	1	5	1				1				15
18-19					2		3	3		2	1	1	1	1					14
16-17										2	2	3		1					8
14-15					1			1			1		3						6
12-13				1															1
10-11								1				1	1	1	1				5
8-9												1			1				2
fx	1	0	0	5	7	7	14	17	17	20	28	20	21	11	11	3	3	1	186

r = 0.208 Significant at 0.01 Level

Table 3.9 Relationship of Readiness to Change and Self-Evaluation for Teachers in All Secondary Schools

Self-Evaluation Scores	Readiness to Change Scores																		
	19-21	22-24	25-27	28-30	31-33	34-36	37-39	40-42	43-45	46-48	49-51	52-54	55-57	58-60	61-63	64-66	67-69	70-72	fy
34-35									2	1		1	1	3					8
32-33							2	2	1	2	5	3	4	3					22
30-31				1		1	2	3	5	4	3	6	7	2	2	2			38
28-29						4		3	4	8	8	8	9	4	2	2	1		53
26-27							3	4	9	7	9	9	4	6	4			1	56
24-25				1	1	2	10	5	7	5	14	7	2	1	2	4	1		62
22-23						3		1	3	7	3	8	2	1				1	29
20-21					1	2	4	3	2	5	1	2	1	2	1				24
18-19					1	2	2	2	4	5	1	2	3	1					23
16-17						2	2	2	1	4	4			3	1				19
14-15									1	1	4	3	1		1	1			12
12-13							1	1	3	1	1	1	2	2					12
10-11										1	1	1	1	1	1				6
8-9								1		1	1		1						4
fx	0	0	0	2	3	16	26	27	42	52	55	51	38	29	14	9	2	2	368

r = 0.087 Not Significant at 0.05 Level

Table 3.10 Relationship of Readiness to Change and Self-Evaluation for Teachers in All Schools

Self-Evaluation Scores	Readiness to Change Scores 19-21	22-24	25-27	28-30	31-33	34-36	37-39	40-42	43-45	46-48	49-51	52-54	55-57	58-60	61-63	64-66	67-69	70-72	fy
34-35					1				2	1		1	2	3		2		1	13
32-33							3	2	2	2	10	5	5	3	1		1		34
30-31				1		1	3	3	6	4	5	8	14	5	5	2			57
28-29						5		5	9	11	11	13	11	6	4	2	2		79
26-27				2		1	6	5	11	12	14	11	7	8	5			1	83
24-25				1	1	4	10	11	10	5	20	9	4	2	2	4	2		85
22-23	1			1	1	5	4	3	7	10	5	9	2	1	1	1		1	52
20-21				1	3	3	6	4	3	10	2	2	1	2	2				39
18-19					3	2	5	5	4	7	2	3	4	2					37
16-17						2	2	2	1	6	6	3		4	1				27
14-15					1			1	1	1	5	3	4		1	1			18
12-13				1			1	1	3	1	1	1	2	2					13
10-11								1		1	1	2	2	2	2				11
8-9								1		1	1	1	1		1				6
fx	1	0	0	7	10	23	40	44	59	72	83	71	59	40	25	12	5	3	554

r = 0.131 Significant at 0.01 Level

which was considered to be accounted for by variance in readiness to change was less than 2 per cent. The largest Pearson r obtained in the subanalyses was 0.221, which produced a coefficient of determination of 0.049. A summary of the coefficient of correlation, its level of significance, and the corresponding coefficient of determination for each analysis used to test this hypothesis is included in Table 3.11.

Table 3.11 Summary of Correlation Coefficients Self-Evaluation and Readiness to Change Under Nine Conditions

	School Climate		
	Open	Closed	Total
Elementary Teachers	r = 0.205 S. at 0.05	r = 0.221 S. at 0.05	r = 0.208 S. at 0.01
	r^2 = 0.042	r^2 = 0.049	r^2 = 0.043
Secondary Teachers	r = 0.116 N. S.	r = 0.054 N. S.	r = 0.087 N. S.
	r^2 = 0.013	r^2 = 0.003	r^2 = 0.008
Total	r = 0.146 S. at 0.05	r = 0.119 N. S.	r = 0.131 S. at 0.01
	r^2 = 0.021	r^2 = 0.014	r^2 = 0.017

r = Pearson Coefficient of Correlation

S = Level of Significance

N. S. = Not Significant

r^2 = Coefficient of Determination

Hypothesis II.--Faculty readiness to change is directly related to the openness of the organizational climate of the school.

The mean change scores of the four elementary schools with the most open climate along with the mean change scores of the four most open secondary schools made up the open condition or Set I of our data. These included schools E--1 through E--4 and S--1 through S--4.

Set II consisted of the change scores of intermediate climate schools E--10 through E--13 and S--6 through S--9. Schools with more closed climates were represented in Set III by the change scores of schools E--20 through E--23 and S--12 through S--15 (Table 3.12).

The stratified-random sampling procedure used was the basis for the assumption that the sampling within sets was random. The observations within the three sets were assumed to be from normally distributed populations. Also assumed for the use of analysis of variance was the approximate equality of variances from within the various sets and total variance being equal to the sum of the contributing variances.

The analysis-of-variance calculations produced an F ratio of 0.16 which was not significant at the required 0.05 level.

Review of the mean change scores in Sets I and III of Table 3.12 revealed that three of the four secondary change scores were higher under the open condition than under the closed condition. The reverse relationship was true for elementary school change scores. This suggested that unequal population variances may have distorted the F ratio. The within-sets mean square of 8.89 also implies a large error variance. Using the same data, a more complex analysis of variance was done considering as sources of variance, organizational climate, grade level (elementary-secondary), and the interaction of these two factors.

The more complex analysis of variance produced no F ratios significant at the required 0.05 level (Table 3.13).

Table 3.12 Readiness to Change and Organizational Climate
Analysis of Variance
Twelve Elementary and Twelve Secondary Schools

	Organizational Climates				
	Open Set I	Set II	Closed Set III		
Elementary	52.83	43.80	48.00		
Elementary	44.67	52.77	50.21		
Elementary	45.00	47.30	49.00		
Elementary	41.67	49.75	52.53		
Secondary	49.82	49.56	46.95		
Secondary	48.95	50.18	46.90		
Secondary	53.28	48.91	49.89		
Secondary	49.16	47.88	48.51		
Mean	48.17	48.77	49.00	Mean	48.65

	Sum of Squares	df	Mean of Squares
Between Sets	2.88	2	1.44
Within Sets	188.49	21	8.98
Totals	191.37	23	

F = 0.16 Not Significant

Table 3.13 Readiness to Change and Organizational Climate, Elementary-Secondary, and Interaction Analysis of Variance Twelve Elementary and Twelve Secondary Schools

	Organizational Climates				
	Open Set I	Set II	Closed Set III		
	52.83	43.80	48.00		
Elementary	44.67	52.77	50.21		
Schools	45.00	47.30	49.00		
	41.67	49.75	52.53		
Mean	46.04	48.41	49.94	Mean	48.13
	49.82	49.56	46.95		
Secondary	48.95	50.18	46.90		
Schools	53.28	48.91	49.89		
	49.16	47.88	48.51		
Mean	50.30	49.13	48.06	Mean	49.17
Climate Means	48.17	48.77	49.00	Mean	48.65

Source of Variance	Sum of Squares	df	Mean of Squares
Elementary-Secondary (ES)	6.24	1	6.24
Organizational Climates (C)	2.88	2	1.44
ES x C Interaction	38.20	2	19.10
Error	144.12	18	8.01
Totals	191.44	23	

F for Interaction = 2.38 Not Significant
F for Climates = 0.18 Not Significant
F for Elem.-Sec. = 0.78 Not Significant

Scatter diagrams in Table 3.14 and 3.15 also suggested that correlations which did exist between organizational climate and readiness to change in secondary and elementary situations were in opposite directions.

Because the number of schools at each level was less than thirty and they were already in rank order, a Spearman rank-difference correlation was obtained in an effort to further test the null hypothesis concerning the relationship between mean OCDQ scores and mean readiness to change scores.

Table 3.14 Scatter Diagram
Readiness to Change and OCDQ Rank
Twenty-three Elementary Schools

	Readiness to Change Scores												
OCDQ Rank	40-41	41-42	42-43	43-44	44-45	45-46	46-47	47-48	48-49	49-50	50-51	51-52	52-53	53-54
													1	
2					1									
						1								
4		1												
								1						
6			1											
			1											
8													1	
								1						
10				1										
													1	
12								1						
										1				
14	1													
												1		
16										1				
							1							
18												1		
										1				
20									1					
											1			
22										1				
												1		

Table 3.15 Scatter Diagram
Readiness to Change and OCDQ Rank
Fifteen Secondary Schools

OCDQ Rank	Readiness to Change Scores													
	46.5 47.0	47.0 47.5	47.5 48.0	48.0 48.5	48.5 49.0	49.0 49.5	49.5 50.0	50.0 50.5	50.5 51.0	51.0 51.5	51.5 52.0	52.0 52.5	52.5 53.0	53.0 53.5
2					1		1							
4						1								1
6						1	1							
8					1			1						
10			1									1		
12	1		1											
14	1				1		1							

A Spearman rank-difference correlation derived from the OCDQ and change score ranks of all twenty-three elementary schools produced a coefficient of -0.32. This was not significant at the 0.05 level (Table 3.16).

A rank-difference correlation of 0.446 for all fifteen secondary schools was significant at the 0.05 level and suggested a nonchance positive relationship between the organizational climate and readiness to change (Table 3.17). Considering this coefficient of correlation a reasonable approximation of a Pearson r and assuming approximate linearity on the basis of the scatter diagrams in Tables 3.14 and 3.15, a coefficient of determination was computed producing an r^2 of 0.20.

Hypothesis III.--Readiness to change is not related to sex, age, teaching experience, teaching level, degree held, marital status, occupation of head of household, occupation of father, or continuing education.

In each subtest of this hypothesis, the frequencies with which levels of readiness to change were associated with levels of each personal characteristic were subjected to a chi-square test to test the existence of a nonchance relationship. A Pearson r was obtained as an index of the correlation between teachers' readiness to change and the personal characteristic. The results of Dempsey's study were included in order to provide a comparison of findings in the two studies.

No appreciable difference could be detected between the readiness to change of male and female teachers (Table 3.18). The chi square of 0.04 and the r of -0.01 were so low that no significant relationship could be implied. This agreed with Dempsey's report (5:96).

Table 3.16 Spearman's Rank-Difference Correlation
Readiness to Change and Organizational Climate
Twenty-three Elementary Schools

Mean Change Score	OCDQ Rank	Change Score Rank
52.83	1	1
44.67	2	18
45.00	3	17
41.67	4	22
47.71	5	13
42.09	6	21
42.56	7	20
52.75	8	3
47.60	9	14
43.80	10	19
52.77	11	2
47.30	12	15
49.75	13	8
40.83	14	23
51.80	15	5
49.67	16	9
46.89	17	16
51.06	18	6
49.50	19	10
48.00	20	12
51.21	21	7
49.00	22	11
52.53	23	4

The Rank Difference Correlation of -0.323 Not Significant

Table 3.17 Spearman's Rank-Difference Correlation
Readiness to Change and Organizational Climate
Fifteen Secondary Schools

Mean Change Score	OCDQ Rank	Change Score Rank
49.82	1	5
48.95	2	9
53.28	3	1
49.16	4	8
49.35	5	7
49.56	6	6
50.18	7	3
48.91	8	10
47.88	9	12
52.37	10	2
47.41	11	13
46.95	12	14
46.90	13	15
49.89	14	4
48.51	15	11

The Rank Difference Correlation of 0.446

Significant at 0.05 Level

Table 3.18 Relationship of Readiness to Change and Sex

Readiness to Change	Frequency Observed		
	Male	Female	Total
Low	87	104	191
Medium	95	112	207
High	78	96	174
Total	260	312	572

Statistics

This Study	Dempsey's
$X^2 = 0.04$	$X^2 = 2.78$
d.f. = 2	d.f. = 2
$P < 0.98$	$P < 0.30$
$r = -0.01$	$r = -0.08$

There did not seem to be a positive relationship between the occupation of a teacher's father and a teacher's readiness to change. Teachers with farm backgrounds seemed slightly less inclined to change, but the overall chi square of 7.36 was not significant at the prescribed level (Table 3.19). This agreed with Dempsey's results (5:110).

There was no evidence of a nonchance relationship between teachers' readiness to change and the occupation of the major wage earner of the family. The chi square of 1.55 fell far short of significance at the 0.05 level (Table 3.20). Dempsey had similar results (5:108).

Elementary and secondary teachers gave no indication of differing in their readiness to change. Significance at the 0.05 level was not met by this chi square of 4.02 (Table 3.21). This agreed with Dempsey's report (5:108).

Table 3.19 Relationship of Readiness to Change and Occupation of Father

Readiness to Change	Frequency Observed			
	Low	Medium	High	Total
Low	73	30	88	191
Medium	102	18	87	207
High	79	21	74	174
Total	254	69	249	572

Statistics

This Study	Dempsey's
X^2 = 7.36	X^2 = 0.05
d.f. = 4	d.f. = 4
P > 0.10	P > 0.99
r = -0.08	r = -0.00

Table 3.20 Relationship of Readiness to Change and Occupation of Major Wage Earner

Readiness to Change	Frequency Observed		
	Professional	Nonprofessional	Total
Low	134	57	191
Medium	149	58	207
High	132	42	174
Total	415	157	572

Statistics

This Study	Dempsey's
X^2 = 1.55	X^2 = 3.46
d.f. = 2	d.f. = 2
P < 0.5	P < 0.20
r = +0.05	r = -0.02

Table 3.21 Relationship of Readiness to Change and Grade Level Taught

Readiness to Change	Frequency Observed		
	Elementary	Secondary	Total
Low	63	128	191
Medium	54	153	207
High	61	113	174
Total	178	394	572

Statistics

This Study	Dempsey's
$X^2 = 4.02$	$X^2 = 3.67$
d.f. = 2	d.f. = 2
$P > 0.10$	$P < 0.20$
$r = -0.02$	$r = 0.04$

The prediction that no relationship exists between readiness to change and marital status was supported by the data. The chi square of 5.13 was not significant at the 0.05 level (Table 3.22).

There was a high probability of a nonchance negative relationship between the number of years of teaching experience and readiness to change. The increased readiness to change of teachers with fewer years of experience and reduced readiness to change of teachers with extensive experience produced a chi square of 28.73 (Table 3.23). The null hypothesis was rejected at the 0.01 level of significance. The Pearson r of -0.24 indicated the negative direction of the relationship. Computing a coefficient of determination yielded an r^2 of 0.06. This was a stronger relationship in the same direction as that reported by Dempsey (5:105).

The data of this study provided an indication of a negative

Table 3.22 Relationship of Readiness to Change and Marital Status

Readiness to Change	Frequency Observed		
	Married	Other	Total
Low	154	37	191
Medium	149	58	207
High	125	49	174
Total	428	144	572

Statistics

This Study	Dempsey's
$X^2 = 5.13$	$X^2 = 1.47$
d.f. = 2	d.f. = 2
$P < 0.10$	$P < 0.5$
$r = 0.04$	$r = 0.06$

Table 3.23 Relationship of Readiness to Change and Teaching Experience

Readiness to Change	Frequency Observed			
	Low	Medium	High	Total
Low	41	84	66	191
Medium	66	101	40	207
High	72	75	27	174
Total	179	260	133	572

Statistics

This Study	Dempsey's
$X^2 = 28.73$	$X^2 = 10.07$
d.f. = 4	d.f. = 4
$P < 0.01$	$P < 0.05$
$r = -0.24$	$r = -0.15$

relationship between teachers' ages and their readiness to change. The chi square of 31.07 significant at the 0.001 level and the product-moment coefficient of correlation of -0.20 statistically supported this position (Table 3.24). The coefficient of determination indicated that 4 per cent of the variance in readiness to change was associated with the variance in age. Dempsey reported a relationship in the same direction but his data fell short of significance at the 0.05 level.

Table 3.24 Relationship of Readiness to Change and Age

	Frequency Observed			
Readiness to Change	Low	Medium	High	Total
Low	78	62	51	191
Medium	123	48	36	207
High	115	43	16	174
Total	316	153	103	572

Statistics

This Study	Dempsey's
$X^2 = 31.07$	$X^2 = 9.04$
d.f. = 4	d.f. = 4
$P < 0.001$	$P > 0.05$
$r = -0.20$	$r = -0.15$

Only minor differences in readiness to change were detected between teachers holding bachelor's and those holding master's degrees. The chi square of 2.72 was not significant at the 0.05 level (Table 3.25). This analysis paralleled Dempsey's study and agreed with his results (5:100).

Table 3.25 Relationship of Readiness to Change and Degree Held - College Graduates

Readiness to Change	Frequency Observed		
	Bachelor's	Master's	Total
Low	125	42	167
Medium	138	57	195
High	112	56	168
Total	375	155	530

Statistics

This Study	Dempsey's
X^2 = 2.72	X^2 = 2.75
d.f. = 2	d.f. = 2
P < 0.30	P < 0.30
r = 0.07	r = 0.05

When readiness to change was related to other than bachelor's- and master's-degree teachers the outcome changed (Table 3.26). The influence of the nondegree teachers produced an r of 0.14 and a chi square of 14.95 which was significant at the 0.01 level. Teachers with a college degree were more ready to change than teachers without a college degree. Dempsey included no similar analysis.

The relationship between teachers' readiness to change and their continuing education was significant at the 0.01 level. This was supported by a chi square of 11.88 and an r of 0.143 (Table 3.27). Dempsey did not find this strong a relationship in his sample (5:102).

Table 3.26 Relationship of Readiness to Change and Degree Held - All Teachers

Readiness to Change	Frequency Observed			
	Bachelor's	Master's	Other	Total
Low	125	42	24	191
Medium	138	57	12	207
High	112	56	6	174
Total	375	155	42	572

Statistics

This Study	Dempsey's
$X^2 = 14.95$	Used only bachelor's and master's and excluded nondegree teachers
d.f. = 4	
$P < 0.01$	
$r = 0.14$	

Table 3.27 Relationship of Readiness to Change and Continuing Education

Readiness to Change	Frequency Observed		
	Yes	No	Total
Low	67	124	191
Medium	94	113	207
High	92	82	174
Total	253	319	572

Statistics

This Study	Dempsey's
$X^2 = 11.88$	$X^2 = 4.14$
d.f. = 2	d.f. = 2
$P > 0.001$	$P < 0.20$
$r = 0.14$	$r = 0.10$

CHAPTER IV

SUMMARY, CONCLUSIONS, AND IMPLICATIONS FOR FUTURE STUDY

The design of this research, the development of the instruments used, the administration of the questionnaires, and the tabulation and analysis of data were presented with very limited editorial comment. This chapter reviews the design and implementation of this study and summarizes the conclusions. Questions and observations relevant to the study are included. Some of these questions and observations had a direct statistical basis; others were quite subjective.

Design and Implementation of the Study

The limitations of the sample and the instrument were presented. The settings in which the questionnaires were administered were rather uniform. The teachers participating seemed receptive and interested in the study. The teachers' continued interest has been evidenced in requests for a report of the outcome of the study.

It would have been desirable to have had a higher percentage of returns from which to develop the data. In this study, however, it was considered more important to obtain a larger number of schools (climates) with a moderate representation from each than to be limited to the few schools willing to provide high involvement.

Requiring statistical relationships to satisfy the 0.05 level of

significance in order to be considered statistically valuable complied with generally accepted research procedures. In dealing with human factors, a 95 per cent probability of a relationship being nonchance is rather demanding. Conversely, a statistically significant relationship can have a very low percentage of the variance of one factor accounted for by variance in the other factor. The nature of the study itself and the potential applications of the results must be carefully considered when evaluating the results of any research.

Hypothesis I.--Readiness to change is directly related to the teachers' perceptions of their ability to handle a proposed innovation.

Conclusions based upon the statistical analysis of pertinent data were summarized as follows:

1. The hypothesis was supported when the total population was considered. This was the anticipated result because of the theoretical basis of Hypothesis I.

2. Hypothesis I was supported in open but not in closed school climates. This may imply that confident teachers were ready to change when the climate was open, encouraging the discussion of new ideas and supportive of innovation. Conversely, teachers lacking confidence may have been reluctant to deviate from existing patterns in a climate where failures could have become generally known.

In a closed climate, although a teacher may have been confident of his personal ability to change, he may have been less ready to change because of perceived obstacles presented by the organizational climate within which he was operating.

3. Hypothesis I was supported in elementary schools and not in secondary schools, regardless of climate. The self-contained or

independent nature of the elementary classroom may have permitted readiness to change to be primarily dependent upon the individual teacher's self-confidence. The interdependent nature of secondary schools may have been inclined to reduce readiness to change of even a confident teacher to the extent that factors external to the individual influenced the situation. A secondary teacher with less self-confidence may have been willing to undergo change in a more closed climate where minimal group involvement could conceal his own inadequacies and partially reduce the risk of personal failure.

4. A slight tendency of the very low self-evaluation scores to reverse the pattern and show an increased readiness to change was observed in Tables 3.4, 3.6, and 3.7. This type of relationship was reported by Secord and Backman (10:346), who cited Homans' conclusions that both high and low status persons conform less than those intermediate in status.

5. In five of the subanalyses the Pearson r obtained supported the rejection of the null hypothesis for that particular relationship at least at the 0.05 level of significance. The extent of these relationships was further defined by noting that the coefficients of determination range from 0.02 to 0.05.

Hypothesis II.--Faculty readiness to change is directly related to the openness of the organizational climate of the school.

The following conclusions and observations were based upon the study of Hypothesis II:

1. The data, as analyzed within the original design, did not support this hypothesis. An apparent reason for the very low F ratio was the opposite relationship observed between the factors of readiness to change and climate in elementary schools and secondary schools.

2. The presence of this joint effect was suggested by the higher F ratios obtained for interaction between variance sources of organizational climate and elementary-secondary classifications. The extent of the relationship was further defined in the scatter diagrams and rank-difference correlations.

In elementary schools, might openness of climate actually retard readiness to change? If so, might this effect in an open elementary climate be due to a perceived loss of the independence usually associated with the elementary classrooms? Rephrasing these questions for the secondary school, might the openness of climate be more supportive of change at the secondary level because of the interrelatedness of the operation?

3. Summarily, teachers in elementary schools with closed organizational climates were more ready to change than elementary teachers in schools with open organizational climates. Teachers in secondary schools with open organizational climates were more ready to change than teachers in secondary schools with closed organizational climates. This both directly refutes and supports Hypothesis II. Attempts to manipulate readiness to change through the organizational climate variable may be precarious.

Hypothesis III.--Readiness to change is not related to sex, age, teaching experience, teaching level, degree held, marital status, occupation of head of household, occupation of father, or continuing education.

The results of this portion of the study were considered as a replication of Dempsey's study and as an indication of the practical implications of demographic characteristics on a faculty's readiness to change.

1. This study and Dempsey's concurred that no significant relationship existed between readiness to change and these personal characteristics: sex, marital status, occupation of major wage earner, occupation of father, grade level taught and degree held (for teachers with a degree).

The positive correlation between readiness to change and the characteristics of age and teaching experience were much stronger in this study than in Dempsey's.

Two characteristics revealed relationships to readiness to change not reported by Dempsey. In analyzing the relationship between teachers' readiness to change and the degree they held, nondegree teachers were included in this study but were excluded by Dempsey. The difference in the number of "other" teachers in this category should be recognized as indicative of the differing populations in the two studies. The other unique observation was this study's report of a significant positive correlation between readiness to change and continuing education.

2. These findings suggested that a faculty's readiness to change would probably be higher if it has a high proportion of young teachers with limited teaching experience, who hold a college degree and are continuing their education. From a practical point of view, it was recognized that despite the rejection of the null hypothesis concerning the relationship of readiness to change and these personal characteristics, a very low percentage of the variance in readiness to change could be associated with the variance in any of these characteristics.

Implications for Future Study

One of the ironies of research is that it usually raises more questions than it answers. This study was no exception. A few of the more promising areas for continued study will be listed here. Some of these were obvious products of the data presented in this paper; others were suggested by situations or questions only hinted at in the process of this study.

This portion of a research report may well be the most essential to the completion of the task at hand. It provides an outlet or an intellectually honest means of postponing, without ignoring, many of the tempting extensions and diversions which frequently interrupted forward progress. The following questions and possibilities constituted such temptations for this writer and are presented as being potential targets for future study.

1. A laboratory experiment using small groups and manipulating the variables of self-confidence and climate as related to readiness to change might shed additional light on the implications of Hypothesis I.

2. This writer suggests that the self-contained quality of the elementary classroom may have produced the correlation between self-confidence and readiness to change. A test of this conclusion could be made by pairing elementary schools using a departmental approach with other elementary schools operating on a self-contained basis. If the independence of the classroom is the determining variable, a result similar to the elementary-secondary relationship of Hypothesis I should be obtained.

3. The relationship of self-confidence to readiness to change

could be studied further in a field experiment where circumstances affecting the self-confidence variable were known and/or controlled. A school system which rates its teachers could analyze the readiness to change of teachers who have been informed of their high or low evaluation.

4. It is difficult to accept at face value the antithetical relationships between organizational climate and readiness to change reported for elementary and secondary schools under Hypothesis II. Additional study will be necessary before this relationship can be better understood and effectively applied. Possible studies include a more detailed analysis of the organizational climate at each level and attempts to identify the specific aspects of climate most closely related to readiness to change.

5. Attempts to manipulate readiness to change through personal characteristics studied in Hypothesis III may be aided by further study of the interrelationships of these characteristics. Analyses using a factorial design could test these interrelationships.

6. A systematic application of the characteristics identified as related to readiness to change (Hypothesis III) could be carried out under carefully observed conditions. The objective of the study would be to determine the feasibility of manipulating these variables as a means of increasing readiness to change.

7. The economic status and concerns of teachers may have been reflected in some of the characteristics studied (years of experience, occupation of major wage earner, and degree held), but were not considered directly. This relationship of readiness to change to economic factors could be considered in terms of teachers' salaries, per pupil cost of instruction, or tax base per pupil.

8. Are teachers who have taught in more than one school district more ready to change than teachers whose entire professional experience is in one district?

9. This writer observed that the schools known to house administrative personnel whose responsibilities extended beyond that building had the most closed climates. A study of this relationship might provide a better basis for considering the advisability of separate administrative buildings.

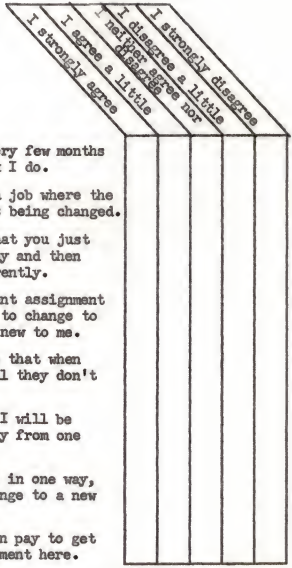
Summary

Readiness to change as a real quality within teachers is essential if education is to prepare successfully the citizens of a tomorrow which defies our imagination. This study has analyzed some factors which may facilitate efforts directed toward increasing readiness to change, make a small contribution to the better understanding of the phenomenon of change itself, and encourage continued investigation of this crucial area of human behavior.

APPENDICES

APPENDIX A

(Original)
READINESS TO CHANGE SCALE



1. If I could do as I pleased, every few months I would change the kind of work I do.
2. One can never feel at ease on a job where the ways of doing things are always being changed.
3. The trouble with teaching is that you just get used to doing things one way and then they want you to do them differently.
4. I would prefer to keep my present assignment which I know I can handle than to change to one where most things would be new to me.
5. The trouble with many people is that when they find a job they can do well they don't stick with it.
6. I like a job where I know that I will be doing my work about the same way from one week to the next.
7. When I get used to doing things in one way, it is disturbing to have to change to a new method.
8. It would take a sizable raise in pay to get me to accept a different assignment here.
9. The job that you would consider ideal for you would be one where the way you do your work (Circle one)

1. Changes a great deal
2. Changes quite a bit
3. Changes somewhat
4. Changes very little
5. Is always the same

A STUDY OF TEACHERS' ATTITUDES TOWARD CHANGE
AS RELATED TO THE ORGANIZATIONAL CLIMATE OF THE SCHOOL

This questionnaire is designed to gather information concerning the way a teacher views and deals with changes which take place in his work situation. Also considered in this questionnaire are teachers' relationships with each other and with the administration as they constitute the organizational climate of the school. The basic study considers the relationship between these two characteristics of teacher attitude toward change and organizational climate.

All information provided will be held in strict confidence. Only group results will be utilized. School names will not be published.

A summary of results of the questionnaires completed by your faculty will be made available to your school for study upon request. This should provide the opportunity to compare attitudes toward change within your school with approximately thirty other participating schools. The organizational climate of your school can be similarly examined and some nationwide results are available on this phase of the instrument.

The Organizational Climate Description Questionnaire is based on an instrument developed by Andrew Halpin and Don B. Croft and published by The Macmillan Company.[1] This represents Part I of the questionnaire. Pages three and four of Part II are an expanded form of

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1. This copyrighted material has been reproduced with the permission of The Macmillan Company, 60 Fifth Avenue, New York, N. Y.

a scale developed by Don A. Trumbo as part of his doctoral dissertation, Michigan State University, 1958.[2]

Your cooperation in this project is sincerely appreciated. If you wish to retain these cover pages, you may. For further information concerning this study, please feel free to contact me at the address below.

Paul M. Ricker, Jr.
Box 401, R. D. 5,
Dover, Pennsylvania 17315

Phone: 717-292-3954

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2. Used with the permission of Don A. Trumbo.

Part I School _____

ORGANIZATIONAL CLIMATE DESCRIPTION QUESTIONNAIRE

The items in this questionnaire describe typical behaviors or conditions that occur within a school organization. Please indicate to what extent each of these descriptions characterizes your school. Please do not evaluate the items in terms of "good" or "bad" behavior, but read each item carefully and respond in terms of how well the statement describes your school.

The descriptive scale on which to rate the items is printed at the top of each page. Please read the instructions which describe how you should mark your answers.

The purpose of this questionnaire is to secure a description of the different ways in which teachers behave and of the various conditions under which they must work. After you have answered the questionnaire we will examine the behaviors or conditions that have been described as typical by the majority of the teachers in your school, and we will construct from this description a portrait of the organizational climate of your school.

Marking Instructions

Printed below is an example of a typical item found in the Organizational Climate Description Questionnaire:

1. Rarely occurs
2. Sometimes occurs
3. Often occurs
4. Very frequently occurs

Teachers call each other by their first names. 1 2 (3) 4

In this example the respondent marked alternative 3 to show that the interpersonal relationship described by this item "often occurs" at his school. Of course, any of the other alternatives could be selected, depending upon how often the behavior described by the item does, indeed, occur in your school.

Please mark your response clearly, as in the example. PLEASE BE SURE THAT YOU MARK EVERY ITEM.

Biographical Information

5-7. School: _____
(Write in the name of your school)

Please place a check mark to the right of the appropriate category.

8.	Position:	Principal	1. _____
		Teacher	2. _____
		Other	3. _____
9.	Sex:	Man	1. _____
		Woman	2. _____
10.	Age:	20-29	1. _____
		30-39	2. _____
		40-49	3. _____
		50-59	4. _____
		60 or over	5. _____
11.	Years of experience in education:		
		0-9	1. _____
		10-19	2. _____
		20-29	3. _____
		30 or over	4. _____
12.	Years at this school:		
		0-4	1. _____
		5-9	2. _____
		10-19	3. _____
		20 or over	4. _____

1. Rarely occurs
2. Sometimes occurs
3. Often occurs
4. Very frequently occurs

13. Teachers' closest friends are other faculty members at this school. 1 2 3 4

14. The mannerisms of teachers at this school are annoying. 1 2 3 4

15. Teachers spend time after school with students who have individual problems. 1 2 3 4

16. Instructions for the operation of teaching aids are available. 1 2 3 4

17. Teachers invite other faculty to visit them at home. 1 2 3 4

18. There is a minority group of teachers who always oppose the majority. 1 2 3 4

19. Extra books are available for classroom use. 1 2 3 4

20. Sufficient time is given to prepare administrative reports. 1 2 3 4

21. Teachers know the family background of other faculty members. 1 2 3 4

22. Teachers exert group pressure on non-conforming faculty members. 1 2 3 4

23. In faculty meetings, there is a feeling of "let's get things done." 1 2 3 4

24. Administrative paper work is burdensome at this school. 1 2 3 4

25. Teachers talk about their personal life to other faculty members. 1 2 3 4

26. Teachers seek special favors from the principal. 1 2 3 4

27. School supplies are readily available for use in classwork. 1 2 3 4

28. Student progress reports require too much work. 1 2 3 4

29. Teachers have fun socializing together during school time. 1 2 3 4

30. Teachers interrupt other faculty members who are talking in staff meetings. 1 2 3 4

31. Most of the teachers here accept the faults of their colleagues. 1 2 3 4

1. Rarely occurs
2. Sometimes occurs
3. Often occurs
4. Very frequently occurs

32.	Teachers have too many committee requirements.	1 2 3 4
33.	There is considerable laughter when teachers gather informally.	1 2 3 4
34.	Teachers ask nonsensical questions in faculty meetings.	1 2 3 4
35.	Custodial service is available when needed.	1 2 3 4
36.	Routine duties interfere with the job of teaching.	1 2 3 4
37.	Teachers prepare administrative reports by themselves.	1 2 3 4
38.	Teachers ramble when they talk in faculty meetings.	1 2 3 4
39.	Teachers at this school show much school spirit.	1 2 3 4
40.	The principal goes out of his way to help teachers.	1 2 3 4
41.	The principal helps teachers solve personal problems.	1 2 3 4
42.	Teachers at this school stay by themselves.	1 2 3 4
43.	The teachers accomplish their work with great vim, vigor, and pleasure.	1 2 3 4
44.	The principal sets an example by working hard himself.	1 2 3 4
45.	The principal does personal favors for teachers.	1 2 3 4
46.	Teachers eat lunch by themselves in their own classrooms.	1 2 3 4
47.	The morale of the teachers is high.	1 2 3 4
48.	The principal uses constructive criticism.	1 2 3 4
49.	The principal stays after school to help teachers finish their work.	1 2 3 4
50.	Teachers socialize together in small select groups.	1 2 3 4
51.	The principal makes all class-scheduling decisions.	1 2 3 4
52.	Teachers are contacted by the principal each day.	1 2 3 4
53.	The principal is well prepared when he speaks at school functions.	1 2 3 4

1. Rarely occurs
2. Sometimes occurs
3. Often occurs
4. Very frequently occurs

54. The principal helps staff members settle minor differences. 1 2 3 4

55. The principal schedules the work for the teachers. 1 2 3 4

56. Teachers leave the grounds during the school day. 1 2 3 4

57. The principal criticizes a specific act rather than a staff member. 1 2 3 4

58. Teachers help select which courses will be taught. 1 2 3 4

59. The principal corrects teachers' mistakes. 1 2 3 4

60. The principal talks a great deal. 1 2 3 4

61. The principal explains his reasons for criticism to teachers. 1 2 3 4

62. The principal tries to get better salaries for teachers. 1 2 3 4

63. Extra duty for teachers is posted conspicuously. 1 2 3 4

64. The rules set by the principal are never questioned. 1 2 3 4

65. The principal looks out for the personal welfare of teachers. 1 2 3 4

66. School secretarial service is available for teachers' use. 1 2 3 4

67. The principal runs the faculty meeting like a business conference. 1 2 3 4

68. The principal is in the building before teachers arrive. 1 2 3 4

69. Teachers work together preparing administrative reports. 1 2 3 4

70. Faculty meetings are organized according to a tight agenda. 1 2 3 4

71. Faculty meetings are mainly principal-report meetings. 1 2 3 4

72. The principal tells teachers of new ideas he has run across. 1 2 3 4

73. Teachers talk about leaving the school system. 1 2 3 4

74. The principal checks the subject-matter ability of teachers. 1 2 3 4

1. Rarely occurs
2. Sometimes occurs
3. Often occurs
4. Very frequently occurs

75. The principal is easy to understand. 1 2 3 4

76. Teachers are informed of the results of a supervisor's visit. 1 2 3 4

77. Grading practices are standardized at this school. 1 2 3 4

78. The principal insures that teachers work to their full capacity. 1 2 3 4

79. Teachers leave the building as soon as possible at day's end. 1 2 3 4

80. The principal clarifies wrong ideas a teacher may have. 1 2 3 4

Part II School _____

PERSONAL INFORMATION

1. How many years have you been employed in this school system?
   Less than one ____ 1. ____ 2. ____ 3. ____ 4. ____
   5-9. ____ 10-14. ____ 15-19. ____ 20 or more ____
2. How many years of teaching experience have you?
   Less than one ____ 1. ____ 2. ____ 3. ____ 4. ____
   5-9. ____ 10-14. ____ 15-19. ____ 20 or more ____
3. At what grade level do you teach?
   K-6 ____ 7-12 ____
4. What is the highest academic degree you now hold?
   Bachelor's ____ Master's ____ Doctorate ____
   Other (specify) ____
5. What professional standing are you actively working toward?
   Bachelor's ____ Master's ____ Permanent certificate ____
   Doctorate ____ Other (specify) ____ None at present ____
6. What was your age at your last birthday?
   20-24 ____ 25-29 ____ 30-34 ____ 35-39 ____
   40-44 ____ 45-49 ____ 50-54 ____ 55-59 ____
   60 or more ____
7. Marital status? Married ____ Single ____ Other ____
8. Father's occupation. (If deceased, what was his occupation for the greatest part of his life? Please be specific.)

   _____

9. List the occupation of the major wage earner in your immediate family. If a married female, list husband's occupation. (Please be specific.) _____

SELF-EVALUATION

In this section you are asked to rate your own ability to deal with certain new ideas, tasks, and situations. Please circle the number which most nearly indicates your level of confidence for each item based on the following scale.

1. Complete Confidence
2. High Confidence
3. Average Confidence
4. Limited Confidence
5. Lacking Confidence

How confident are you of your ability to effectively deal with:

1. the evaluation and implementation of new teaching techniques? 1 2 3 4 5
2. revisions of content within the subjects you teach? 1 2 3 4 5
3. changes in administrative routine? 1 2 3 4 5
4. a change of job to a school other than this one? 1 2 3 4 5
5. a change of job within this school? 1 2 3 4 5
6. changes in the administrative staff of the school? 1 2 3 4 5
7. the development of good working relationships with teachers new to this school? 1 2 3 4 5

ATTITUDE TOWARD CHANGE

Your responses in this section should indicate the extent to which you agree or disagree with each statement. The following scale will be used for all items except the last one which has a different set of response choices. Circle the number of the response which most nearly states your attitude.

1. I strongly agree
2. I agree a little
3. I neither agree nor disagree
4. I disagree a little
5. I strongly disagree

1. If I could do as I pleased, every few months I would change the kind of work I do. 1 2 3 4 5
2. One can never feel at ease on a job where the ways of doing things are always being changed. 1 2 3 4 5
3. The trouble with teaching is that you just get used to doing things one way and then they want you to do them differently. 1 2 3 4 5
4. I would prefer to keep my present assignment which I know I can handle than to change to one where most things would be new to me. 1 2 3 4 5
5. The trouble with many people is that when they find a job they can do well they don't stick with it. 1 2 3 4 5
6. I like a job where I know that I will be doing my work about the same way from one week to the next. 1 2 3 4 5
7. When I get used to doing things in one way, it is disturbing to have to change to a new method. 1 2 3 4 5
8. It would take a sizable raise in pay to get me to accept a different assignment here. 1 2 3 4 5
9. For a teacher, persistence is more important than ingenuity. 1 2 3 4 5
10. Rapidly changing subject organization and content make teaching a more satisfying occupation. 1 2 3 4 5

1. I strongly agree
2. I agree a little
3. I neither agree nor disagree
4. I disagree a little
5. I strongly disagree

11. Personnel changes in a teaching staff usually strengthen a faculty. 1 2 3 4 5

12. It is a good idea to change jobs about every five years. 1 2 3 4 5

13. A stable routine provides the best setting for effective teaching. 1 2 3 4 5

14. It is better to continue to use methods of teaching which have proven effective than to try new approaches. 1 2 3 4 5

1. Is always the same
2. Changes very little
3. Changes somewhat
4. Changes quite a lot
5. Changes a great deal

15. The job that you would consider ideal for you would be one where the way you do your work 1 2 3 4 5

APPENDIX B

Percentage of Returns, Elementary Schools

Schools	Teachers on Staff	Maximum Usable Returns	Per Cent Returns
E--1	8	6	75.0
E--2	6	3	50.0
E--3	6	5	83.3
E--4	4	3	75.0
E--5	7	7	100.0
E--6	12	11	91.7
E--7	13	9	69.2
E--8	6	4	66.7
E--9	18	15	83.3
E--10	14	10	71.4
E--11	13	13	100.0
E--12	13	10	76.9
E--13	10	8	80.0
E--14	6	6	100.0
E--15	6	5	83.3
E--16	13	6	46.2
E--17	11	9	81.8
E--18	17	17	100.0
E--19	14	8	57.1
E--20	5	5	100.0
E--21	14	14	100.0
E--22	6	6	100.0
E--23	17	15	88.2
Totals	239	195	~~82.8~~ 81.6

Percentage of Returns

Secondary Schools

Schools	Teachers on Staff	Maximum Usable Returns	Per Cent Returns
S--1	55	28	50.9
S--2	27	20	74.1
S--3	40	34	85.0
S--4	52	37	71.2
S--5	42	17	40.5
S--6	41	32	78.0
S--7	46	33	71.7
S--8	48	34	70.8
S--9	24	16	66.7
S--10	18	16	88.9
S--11	48	27	56.3
S--12	43	21	48.8
S--13	45	23	51.1
S--14	56	26	46.4
S--15	42	35	83.3
Totals			
Secondary	627	399	63.6
Elementary	239	195	81.6
All Schools	866	594	68.6

Elementary Schools Ranked by Climate

Schools	Open	Autonomous	Controlled	Familiar	Paternal	Closed
E--1	48	52	66	68	95	99
E--2	54	62	60	73	92	99
E--3	64	79	69	71	86	98
E--4	86	39	86	65	102	73
E--5	68	41	87	58	93	87
E--6	75	62	97	66	83	70
E--7	97	64	81	69	98	70
E--8	89	68	35	111	99	85
E--9	84	66	44	104	102	85
E--10	68	61	44	106	105	92
E--11	87	57	96	50	60	52
E--12	83	95	100	47	46	60
E--13	104	85	65	102	97	70
E--14	97	66	85	88	102	58
E--15	105	93	66	106	97	52
E--16	102	92	98	72	84	52
E--17	102	85	77	80	68	50
E--18	106	86	88	86	91	49
E--19	112	106	70	104	84	47
E--20	114	95	72	92	71	44
E--21	96	101	108	54	66	41
E--22	119	95	87	81	78	23
E--23	109	95	92	79	68	20

Secondary Schools Ranked by Climate

Schools	Open	Autonomous	Controlled	Familiar	Paternal	Closed
S--1	68	40	82	78	99	79
S--2	73	50	100	50	78	84
S--3	67	54	81	68	80	87
S--4	78	77	100	52	53	67
S--5	84	74	75	75	71	76
S--6	106	114	76	90	70	47
S--7	90	93	109	60	51	38
S--8	101	102	90	79	45	32
S--9	120	98	69	96	87	30
S--10	105	105	91	80	59	30
S--11	100	107	96	72	50	28
S--12	103	106	94	79	48	27
S--13	114	109	86	88	65	22
S--14	116	95	91	78	63	22
S--15	116	104	92	78	65	20

All Schools Ranked by Climate

Schools	Open	Autonomous	Controlled	Familiar	Paternal	Closed
E--1	18	52	66	68	95	99
E--2	54	62	60	73	92	99
E--3	64	79	69	71	86	98
E--4	86	39	86	65	102	73
S--1	68	40	82	78	99	79
E--5	68	41	87	58	93	87
S--2	73	50	100	50	78	84
S--3	67	54	81	68	80	87
E--6	75	62	97	66	83	70
E--7	97	64	81	69	98	70
E--8	89	68	35	111	99	85
E--9	84	66	44	104	102	85
E--10	68	61	44	106	105	92
S--4	78	77	100	52	53	67
E--11	87	57	96	50	60	52
S--5	84	74	75	75	71	76
E--12	83	95	100	47	46	60
E--13	104	85	65	102	97	70
E--14	97	66	85	88	102	58
E--15	105	93	66	106	97	52
E--16	102	92	98	72	84	52
E--17	102	85	77	80	68	50
E--18	106	86	88	86	91	49

All Schools Ranked by Climate, Cont.

Schools	Open	Autonomous	Controlled	Familiar	Paternal	Closed
E--19	112	106	70	104	84	47
S--6	106	114	76	90	70	47
E--20	114	95	72	92	71	44
E--21	96	101	108	54	66	41
S--7	90	93	109	60	51	38
S--8	101	102	90	79	45	32
S--9	120	98	69	96	87	30
S--10	105	105	91	80	59	30
S--11	100	107	96	72	50	28
S--12	103	106	94	79	48	27
E--22	119	95	87	81	78	23
S--13	114	109	86	88	65	22
S--14	116	95	91	78	63	22
E--23	109	95	92	79	68	20
S--15	116	104	92	78	65	20

Mean Readiness to Change Scores by Schools

School	Mean Readiness to Change Scores	School	Mean Readiness to Change Scores
E--1	52.83	S--1	49.82
E--2	44.67	S--2	48.95
E--3	45.00	S--3	53.28
E--4	41.67	S--4	49.16
E--5	47.71	S--5	49.35
E--6	42.09	S--6	49.56
E--7	42.56	S--7	50.18
E--8	52.75	S--8	48.91
E--9	47.60	S--9	47.88
E--10	43.80	S--10	52.37
E--11	52.77	S--11	47.41
E--12	47.30	S--12	46.95
E--13	49.75	S--13	46.90
E--14	40.83	S--14	49.89
E--15	51.80	S--15	48.51
E--16	49.67		
E--17	46.89		
E--18	51.06		
E--19	49.50		
E--20	48.00		
E--21	50.21		
E--22	49.00		
E--23	52.53		

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BIOGRAPHICAL SKETCH

Paul Milton Ricker, Jr., was born April 21, 1928, in Harrisburg, Pennsylvania. In June, 1946, he graduated from Elizabethtown High School. In August, 1949, he received the degree of Bachelor of Science in Education from Millersville State Teachers College and the Master of Education degree in 1955 from Western Maryland College. From 1949 to 1952 Mr. Ricker taught mathematics and social studies and served one year as Acting Principal in the New Freedom Borough Schools. From 1952 to 1954 he was an X-ray technician in the U. S. Army Medical Corps. Following his discharge from the army, he resumed his teaching career as head of the mathematics department and later assistant high school principal in the Southern Joint School District of York County, Pennsylvania.

In 1960 Mr. Ricker became principal of Dover Area High School. It was from this position he was granted a sabbatical leave to enroll in the Graduate School of the University of Florida in 1965 to pursue the degree of Doctor of Education.

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This dissertation was prepared under the direction of the chairman of the candidate's supervisory committee and has been approved by all members of that committee. It was submitted to the Dean of the College of Education and to the Graduate Council, and was approved as partial fulfillment of the requirements for the degree of Doctor of Education.

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